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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,651	09/17/2003	Michael L. Crabtree	O02-077A	8493

26683 7590 07/14/2004

THE GATES CORPORATION  
IP LAW DEPT. 10-A3  
1551 WEWATTA STREET  
DENVER, CO 80202

EXAMINER

KING, BRADLEY T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/666,651

Applicant(s)

CRABTREE, MICHAEL L.

Examiner

Bradley T King

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/2003 4/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 8, 12, 15, 18 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 8, 12, 15, 18 and 22 all recite, "the outer surface has a ratio". It is not clear what is meant by the limitation.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, 12-16, and 18-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Warmuth (US# 4911416).

Warmuth discloses all the limitations of the instant claims including: a flexible sleeve 71 having one end attached to an end member 66 and the other end attached to a piston 76; the piston having an outer surface having an elliptical cross-section (described as an egg shape); and the flexible sleeve forming a rolling lobe cooperatively engaged with the outer surface.

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Regarding claims 2, 7, 14 and 21, figure 2 shows the end member 66 tilted with respect to a piston major axis defined by the shoulder 80.

Regarding claims 3, 8, 12, 15, 18 and 22, Warmuth discloses a piston 414 having an elliptical cross-section having a ratio of approximately 1. See figure 8.

Regarding claims 4-6, 9-10, 13, 16, 19 and 23-24, figure 8 of Warmuth discloses a piston 414 having an elliptical cross-section (read in light of the disclosure) and flexible sleeve elliptical stress distribution at 90 degrees to a major axis, and will have a uniform circular stress distribution since the piston is circular and the tilt angle is zero.

Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Goshima et al (US# 4854557).

Goshima et al disclose all the limitations of the instant claims including: a flexible sleeve 11 having one end attached to an end member 13 and the other end attached to a piston 12; the piston having an outer surface having an elliptical cross-section (see figure 4); and the flexible sleeve forming a rolling lobe cooperatively engaged with the outer surface.

Regarding claims 2, 7, 14 and 21, see figure 5.

Regarding claims 3, 8, 12, 15, 18 and 22, Goshima et al disclose a piston 12 having an elliptical cross-section having a ratio of approximately 1. See figure 1.

Regarding claims 4-6, 9-10, 13, 16, 19 and 23-24, Goshima et al disclose substantially similar structure (see figure 5) and further disclose uniform stress

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distribution. It is maintained that the features of the instant claims are inherent to the structure of Goshima et al.

**Conclusion**

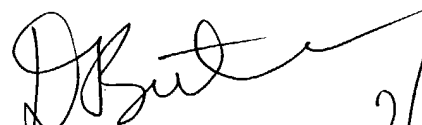
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishioka et al who shows a gas spring.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (703) 308-8346. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BTK

  
DOUGLAS C. BUTLER  
PRIMARY EXAMINER  
2/11/04  
AV3683